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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,746	07/17/2006	Ursula Ziegler	05587-00409-US	3484
23416 7590 09/11/2007 CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899			EXAMINER CHEN, VIVIAN	
			ART UNIT 1773	PAPER NUMBER
			MAIL DATE 09/11/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/584,746	ZIEGLER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Vivian Chen	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 14 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

1. Claim 13 has been cancelled by Applicant.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-12, 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over:

ZIEGLER ET AL (US 6,296,797),

in view of EP 1 118 458 (EP '458) or MUTSUDA (US 6,517,949),

and in view of MASUBUCHI ET AL (US 2001/0041772).

ZIEGLER ET AL '797 discloses composite bodies comprising a polyacetal component (e.g., polyoxymethylene) having thermoplastic elastomer components directly molded thereon, wherein the bond strength between the elastomer and the polyacetal components is at least 0.5 N/mm<sup>2</sup>. The elastomer and the polyacetal components optionally contain conventional additives (e.g., stabilizers, nucleating agents, etc.). The composites are formed by injection molding a polyacetal component, followed by injection molding the elastomer component onto and over the polyacetal component, wherein the polyacetyl component is optionally preheated to at least 80°C to less than its melting point, and wherein the elastomer component has a typical melt

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temperature of 180-240°C, and wherein the mold temperature for the elastomer molding step is typically 20-100°C. The composite bodies form conveying and/or connectors with high durability and good dampening characteristics. (entire document, e.g., line 8-22, col. 1; line 47-50, col. 2; line 52, col. 2 to line 37, col. 3; line 60, col. 3 to line 8, col. 4; line 30-45, col. 5; line 52, col. 5 to line 2, col. 6; etc.) However, the reference does not explicitly disclose the use of polyester elastomers.

EP '458 and MUTSUDA ET AL disclose that it is well known in the art to use either polyester elastomers or polyurethane elastomers in composites with polyacetyl components in order to form durable, delamination resistant composite articles. (EP '458, paragraph 14, 18) (see corresponding portions of MUTSUDA ET AL).

MASUBUCHI ET AL discloses it is well known in the art to use thermoplastic polyetherester elastomers having a typical hardness of Shore D 32, wherein the elastomer comprises polybutylene terephthalate hard segments and polytetramethylene oxide soft segments in compositions suitable for conventional elastomer applications in order to obtain articles with advantageous flexibility, durability, heat resistance, chemical resistance, and other physical properties. (paragraphs 15-16, 20, 22, 112)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use known polyester-based elastomers as the elastomer component in the composites of ZIEGLER ET AL '797 in order to obtain the optimum combination of mechanical properties, chemical and heat resistance, and other physical properties required to meet the requirements of specific applications. One of ordinary skill in the art would have selected the coverage and positioning of the elastomeric component depending on the specific

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mechanical and structural requirements for a given usage. It would have been obvious to apply multiple elastomer components on the polyacetal component (claim 9) depending on the specific structural and dampening requirements required for a specific application.

### *Conclusion*

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vivian Chen whose telephone number is (571) 272-1506. The examiner can normally be reached on Monday through Thursday from 8:30 AM to 6 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

The General Information telephone number for Technology Center 1700 is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

August 31, 2007



Vivian Chen  
Primary Examiner  
Art Unit 1773